

REMARKS

The pending ~~claims~~ are directed toward methods for deinking wastepaper, and compositions used for deinking. The compositions include an alkoxylated fatty alcohol and between 20 and 60 wt.% of a fatty acid. These compositions differ from previous compositions because they can be used in reduced alkali systems, whereas most prior art compositions were used in alkali systems. The compositions also differ from the prior art because of the amount of fatty acid used, and the usual liquefied state of the composition. In contrast, deinking compositions as described in Borshardt that contain ethoxylated fatty alcohols with less than 15% fatty acids are typically provided as pastes and or solids and are not liquids as claimed herein.

The Office Action rejects many of the pending claims as anticipated by and obvious over U.S. Patent No. 5,227,019 to Borshardt. The Borshardt patent discloses a flotation deinking process carried out in alkaline to mildly alkaline conditions, using an alcohol ethoxylate or an alcohol propoxyethoxylate as the deinking agent. The patent discloses that the alcohol alkoxylate can be mixed with small amounts of a fatty acid, but no more than 15%, and preferably no more than 5% fatty acid based on the total weight of the deinking agent. Example 15 is the only example to use a fatty acid in the composition, and the fatty acid was used as a "foam reducer" in that example. See Col. 14, lines 46-49.

The Borshardt patent does not anticipate the pending claims because it does not disclose a deinking agent having more than 20 wt.% of a fatty acid. In addition, it does not render the pending claims obvious because a skilled worker would not have been motivated to add 20 wt.% of a fatty acid because (1) Borshardt added the fatty acid as a defoaming agent, and defoaming agents are not typically added in such high amounts because as the amount of defoamer increases the reject volume decreases and the deinking pulp quality often becomes less favorable as more "foam reducer" is added, and (2) Borshardt specifically limits his disclosure of the "foam reducer" (fatty acids) to no more than 15 wt.% in column 7, lines 1-12.

Furthermore, the claimed invention results in superior and unexpected advantages that were not recognized and could not have been predicted from the teachings of the Borshardt patent. For example, the compositions of the present invention are typically present as liquids due to the high fatty acid content, which is far superior to the pastes and solid compositions

disclosed in the Borschardt patent, because pastes and solid agents most often require melting and/or some other additional preparation before being added to the deinking process.

Moreover, as shown in Table 10 of the specification, the blends of the present invention give synergistic results when compared with fatty acids alone or alkoxylated fatty alcohols alone. As shown in that table there are four sets of data demonstrating this synergy. For instance, the fatty acid alone gives a brightness of 48.6, and the alkoxylated fatty alcohol gives a brightness of 53.5, whereas a combination of the two gives a brightness value of 54.5. These superior results could not have been predicted from the prior art cited in the office Action, and prove the non-obviousness of the claimed compositions.

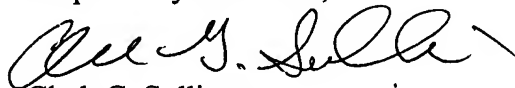
The secondary references cited in the Office Action do not cure the deficiencies of the Borschardt patent. WO 93/22491 and the Robinson patent (US 6,544,383) disclose the use of epoxidized fatty acids and tall oil as deinking agents, but there is no suggestion in the references to use these compositions in combination with the fatty alcohols disclosed by Borschardt at the weight ratios recited in the pending claims. A skilled worker would not have been motivated to do so because Borschardt used the fatty acid as a "foam reducer." See Col. 14, lines 46-49. Absent such a suggestion, these references do not support a prima facie case of obviousness.

For the above and foregoing reasons, Applicant respectfully requests that the pending rejections be withdrawn and that the application be allowed for issuance.

CONCLUSION

The Examiner is invited to contact the undersigned at 404-572-3513 should he have any questions concerning this application or response. To the extent any fee is due in connection with this submission, the Commissioner is hereby authorized to charge such fee to deposit account number 14-0629.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service in an express mail envelope EV469843673US addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on June 20, 2005.



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